

Interview Summary	Application No.	Applicant(s)	
	10/601,512	KUO ET AL.	
	Examiner	Art Unit	
	Patrick D. Niland	1714	

All participants (applicant, applicant's representative, PTO personnel):

(1) Patrick D. Niland. (3)_____.

(2) John Collins (Reg. No. 26262). (4)_____.

Date of Interview: 18 July 2006.

Type: a) ☐ Telephonic b) ☐ Video Conference
c) ☒ Personal [copy given to: 1) ☐ applicant 2) ☒ applicant's representative]

Exhibit shown or demonstration conducted: d) ☒ Yes e) ☐ No.

If Yes, brief description: Copy of proposed amendment attached.

Claim(s) discussed: all.


Identification of prior art discussed: cited.

Agreement with respect to the claims f) ☐ was reached. g) ☒ was not reached. h) ☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Applicant might delete "about" but the art recites this term also. The examiner will reconsider the claims in light of the prior art upon refiling an RCE. The applicant might show more examples to establish unexpected results in light of the newly proposed amounts.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.


PATRICK D. NILAND
PRIMARY EXAMINER

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

Examiner's signature, if required

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

FAX TRANSMISSION

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To: Examiner Patrick Niland **Date:** July 18, 2006
Fax #: 571-273-1121 **Pages:** 12, including this cover sheet.
From: John M. Collins
Subject: Serial No. 10/601,512 – Proposed Amendment After Final Rejection

COMMENTS:

Operator: Suzi Foster

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Kuo et al.

Serial No.: 10/601,512

Group Art Unit: 1714

Filed: June 23, 2003

Examiner: Patrick Dennis Niland

For: SMALL-PARTICLE LATEX COMPOSITIONS BASED ON WATERBORNE
ALKYD SEEDS

Mail Stop AF

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

PROPOSED AMENDMENT AFTER FINAL REJECTION

In response to the Office Action dated May 18, 2006, entry of the following amendment and consideration of the following remarks are respectfully requested.

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Amendment to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently amended) An aqueous latex dispersion composition, comprising the emulsion polymerization reaction product of:

(a) about 2 to about ~~45~~ 8 weight percent, based on the total weight of (a) and (b), of a sulfonated alkyd;

(b) about ~~85~~ 92 to about 98 weight percent, based on the total weight of (a) and (b), of one or more ethylenically unsaturated monomers; and

(c) a catalytic amount of an initiator for free-radical emulsion polymerization,

wherein components (b) and (c) are fed into an aqueous dispersion of (a) during the emulsion polymerization process,

wherein the average particle size of the aqueous latex dispersion obtained is from about 60 to about 140 nm.

2. (Original) The aqueous latex dispersion composition according to claim 1, wherein the sulfonated alkyd comprises the polycondensation reaction product of: i. about 10 to about 50 weight percent of one or more of: a glycol or a polyol, ii. about 10 to about 80 weight percent of one or more of: a monobasic fatty acid, a monobasic fatty ester, a naturally occurring oil, or a partially-saponified oil, iii. about 5 to about 40 weight percent of one or more of: a dicarboxylic acid or anhydride or a poly-carboxylic acid or anhydride, and iv. about 5 to about 15 weight percent of one or more of: a sulfomonomer or a sulfomonomer adduct containing at least one sulfomonomer group, wherein the weight percent is based on the weight of the sulfomonomer, wherein the

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weight percents of (i), (ii), (iii), and (iv) are based on the total weight of (i), (ii), (iii), and (iv).

3. (Canceled)
4. (Original) The aqueous latex dispersion according to claim 1, wherein the average particle size of the aqueous latex dispersion obtained is from about 70 to about 130 nm.
5. (Original) The aqueous latex dispersion according to claim 1, wherein the average particle size of the aqueous latex dispersion obtained is less than about 140 nm.
6. (Original) The aqueous latex dispersion according to claim 1, wherein the average particle size of the aqueous latex dispersion obtained is less than about 130 nm.
7. (Original) The aqueous latex dispersion according to claim 1, wherein the average particle size of the aqueous latex dispersion obtained is less than 110 nm.
8. (Original) The aqueous latex dispersion according to claim 1, wherein the particle size of the aqueous dispersion of the waterborne alkyd is from about 15 to about 50 nm.
9. (Original) The aqueous latex dispersion according to claim 1, wherein the particle size of the aqueous dispersion of the waterborne alkyd is from about 20 to about 40 nm.
10. (Canceled)
11. (Canceled)

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12. (Original) The aqueous latex dispersion according to claim 1, wherein the initiator comprises one or more of: hydrogen peroxide, a potassium peroxydisulfate, an ammonium peroxydisulfate, dibenzoyl peroxide, lauryl peroxide, ditertiary butyl peroxide, 2,2'-azobisisobutyronitrile, t-butyl hydroperoxide, or benzoyl peroxide.

13. (Original) The aqueous latex dispersion according to claim 1, wherein the one or more ethylenically unsaturated monomers comprise one or more of: styrene, .alpha.-methyl styrene, vinyl naphthalene, vinyl toluene, chloromethyl styrene, methyl acrylate, acrylic acid, methacrylic acid, methyl methacrylate, ethyl acrylate, ethyl methacrylate, butyl acrylate, butyl methacrylate, isobutyl acrylate, isobutyl methacrylate, ethylhexyl acrylate, ethylhexyl methacrylate, octyl acrylate, octyl methacrylate, glycidyl methacrylate, carbodiimide methacrylate, an alkyl crotonate, vinyl acetate, di-n-butyl maleate, di-octylmaleate, t-butylaminoethyl methacrylate, dimethylaminoethyl methacrylate, diethylaminoethyl methacrylate, N,N-dimethylaminopropyl methacrylamide, 2-t-butylaminoethyl methacrylate, N,N-dimethylaminoethyl acrylate, N-(2-methacryloyloxy-ethyl-)ethylene urea, or methacrylamidoethylethylene urea.

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14. (Currently amended) A process for preparing an aqueous latex dispersion, comprising the steps of:

preparing an aqueous dispersion of a sulfonated alkyd to form seed particles; and

polymerizing one or more ethylenically unsaturated monomers, in the presence of the sulfonated alkyd resin seed particles, to obtain an aqueous latex dispersion,

wherein the sulfonated alkyd resin is provided in an amount from about 2 to about ~~45~~ 8 wt. %, and wherein the one or more ethylenically unsaturated monomer is provided in an amount of from about 92 to about 98 wt. %, based on the total weight of the sulfonated alkyd resin and the one or more ethylenically unsaturated monomer,

wherein the average particle size of the aqueous latex dispersion obtained is from about 60 to about 140 nm.

15. (Original) The process according to claim 14, wherein the sulfonated alkyd comprises the polycondensation reaction product of: i. about 10 to about 50 weight percent of one or more of: a glycol or a polyol, ii. about 10 to about 80 weight percent of one or more of: a monobasic fatty acid, a monobasic fatty ester, a naturally occurring oil, or a partially-saponified oil, iii. about 5 to about 40 weight percent of one or more of: a di carboxylic acid or anhydride or a poly-carboxylic acid or anhydride, and iv. about 5 to about 15 weight percent of one or more of: a sulfomonomer or a sulfomonomer adduct containing at least one sulfomonomer group, wherein the weight percent is based on the weight of the sulfomonomer, wherein the weight percents of (i), (ii), (iii), and (iv) are based on the total weight of (i), (ii), (iii), and (iv).

16. (Canceled)

17. (Original) The process according to claim 14, wherein the average particle size of the aqueous latex dispersion obtained is from about 70 to about 130 nm.

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18. (Original) The process according to claim 14, wherein the average particle size of the aqueous latex dispersion obtained is less than about 140 nm.
19. (Original) The process according to claim 14, wherein the average particle size of the aqueous latex dispersion obtained is less than about 130 nm.
20. (Original) The process according to claim 14, wherein the average particle size of the aqueous latex dispersion obtained is less than 110 nm.
21. (Original) The process according to claim 14, wherein the particle size of the sulfonated alkyd seed particles is from about 15 to about 50 nm.
22. (Original) The process according to claim 14, wherein the particle size of the sulfonated alkyd seed particles is from about 20 to about 40 nm.
23. (Canceled)
24. (Canceled)
25. (Original) The process according to claim 14, wherein the polymerizing is carried out in the presence of an initiator comprising one or more of: hydrogen peroxide, a potassium peroxydisulfate, an ammonium peroxydisulfate, dibenzoyl peroxide, lauryl peroxide, ditertiary butyl peroxide, 2,2'-azobisisobutyronitrile, t-butyl hydroperoxide, or benzoyl peroxide.
26. (Original) The process according to claim 14, wherein the one or more ethylenically unsaturated monomers comprise one or more of: styrene, .alpha.-methyl styrene, vinyl naphthalene, vinyl toluene, chloromethyl styrene, methyl acrylate, acrylic acid, methacrylic acid, methyl methacrylate, ethyl acrylate, ethyl methacrylate, butyl

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acrylate, butyl methacrylate, isobutyl acrylate, isobutyl methacrylate, ethylhexyl acrylate, ethylhexyl methacrylate, octyl acrylate, octyl methacrylate, glycidyl methacrylate, carbodiimide methacrylate, an alkyl crotonate, vinyl acetate, di-n-butyl maleate, di-octylmaleate, t-butylaminoethyl methacrylate, dimethylaminoethyl methacrylate, diethylaminoethyl methacrylate, N,N-dimethylaminopropyl methacrylamide, 2-t-butylaminoethyl methacrylate, N,N-dimethylaminoethyl acrylate, N-(2-methacryloyloxyethyl-)ethylene urea, or methacrylamidoethylethylene urea.

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27. (Currently amended) In a process for producing an aqueous latex dispersion via emulsion polymerization of at least one ethylenically unsaturated monomer, the improvement comprising:

carrying out the emulsion polymerization process in the presence of sulfonated alkyd seed particles provided in an amount from about 2 to about 45 8 weight percent, and wherein the at least one ethylenically unsaturated monomer is provided in an amount of from about 92 to about 98 wt. %, with respect to the total weight of the latex polymer obtained, wherein the average particle size of the aqueous latex dispersion obtained is from about 60 to about 140 nm.

28. (Original) The aqueous latex dispersion prepared by the process according to claim 14.

29. (Original) A coated article, prepared by applying the aqueous latex dispersion of claim 1 to an article, and drying the coating composition.

30. (Original) A coating composition, comprising the aqueous latex dispersion according to claim 1.

31. (Original) The coating composition according to claim 30, further comprising one or more fillers and/or pigments.

32. (Original) An article coated with the coating composition of claim 31.

33. (Original) The article according to claim 32, wherein the article is a member selected from the group consisting of wood, wood by-products, gypsum board, metal, plastic, concrete, a textile product, leather, and masonry.

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REMARKS

Claims 1-2, 4-9, 12-22, and 25-33 remain for consideration in this application. In view of the claims as they now stand, the rejections of the last action are respectfully traversed,

Claims 1, 14, and 27 are in independent format, and each of these claims has been amended to recite a range of from about 2-8 percent by weight, based upon the total weight of the sulfonated alkyd/monomer total weight in the reaction mixture. Also, each now recites a corresponding monomer range of about 92-98 percent by weight. These amendments are fully supported by the specification which recites a preferred alkyd limit of 8 percent and a preferred monomer limit of 92 percent (see p. 10, lines 5-8).

These amendments also unquestionably distinguish the cited prior art, namely the '149 Clark patent. That reference discloses the use of significantly higher amounts of alkyd, as compared with the presently claimed levels. As set forth at column 10, lines 27-30, ranges of 5-60, preferably 10-50, and more preferably 20-40 percent of alkyd are recited. Thus, with respect to the alkyd range, there is only a very slight overlap between the claimed 2-8% range and the broadest, non-preferred 5-60% range of the reference. In addition, the claims presently recite an amount of about 92-98% for the monomer. This is nowhere suggested or taught in the reference, which calls for monomer ranges of 30-90, more preferably 50-80, and most preferably 60-80 percent. Hence, there is absolutely no overlap between this claimed range and the reference.

It is also submitted that the Clark reference does not render obvious the present claims. The broad ranges taught by the reference, even with the insignificant overlap noted, do not teach the presently claimed ranges with sufficient specificity as required by MPEP 2131.03. That section emphasizes that, in order to anticipate or render obvious, a reference teaching must be sufficiently specific in the context that the reference must "clearly envisage" the claimed invention. That is certainly not the case here. Indeed, the reference, by emphasizing more rather than less alkyd, and less rather than more monomer, directly teaches away from the claimed invention.

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It is also clear that the claimed invention has demonstrably unexpected advantages not contemplated by the prior art. Example 10 of the present specification describes preparation of a latex dispersion using about 8% alkyd (the upper limit of the presently alkyd range), yielding an aqueous latex having an average particle size of 104 mm. This is one third of the particle size of Example 5 of the reference which employs 20% alkyd. As emphasized in the last amendment, the present invention provides significantly smaller particle sizes while using relatively low amounts of alkyd resin. This discovery is directly contrary to the teachings of the '149 patent, see, e.g., Examples 5 and 6. It is submitted that the specification examples illustrate the unexpected advantages of the invention, commensurate with the scope of the invention as now claimed, using a maximum of about 8% alkyd resin.

The presently amended claims are not anticipated by Clark for the reasons outlined. No reading of the reference could meet the twin ranges now claimed for alkyd resin and monomer. Withdrawal of all rejections predicated upon Section 102 is therefore appropriate. In like manner, the claims are not rendered obvious by the Clark reference. Clark in no way envisages the presently claimed low alkyd/high monomer latex resins, and in fact teaches away from such products. Finally, if there be any doubt, the examples from the instant specification establish surprising and unexpected results commensurate with the present claims.

No Fee is believed to be due. However, the Commissioner is hereby authorized to charge any deficiency or credit any overpayment in fees to Deposit Account No. 05-0221.

Respectfully submitted,

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Date

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CERTIFICATE OF MAILING UNDER 37 CFR 1.8(a)

I hereby certify that this paper (along with any referred to as being attached or enclosed) is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Jodi L. Owenby

Date